

Docket No. BPHOTO.003

ABSTRACT OF THE DISCLOSURE

A system capable of creating multiple beams of light using laterally coupled waveguides. Each beam is of a different central wavelength, capable of being generated on chip and coupled into a single fiber, and emitted from a single outcoupling grating (OCG). The present innovations can be used to create a multiple wavelength source generating multiple signals of different wavelengths simultaneously. The present innovations can also function as a tunable laser source system, capable of generating one of many different wavelength signals at a time. Waveguides are laterally coupled through, for example, evanescent coupling. The degree of coupling is controlled by varying the voltage applied to contacts attached to the waveguides at the coupling region.